

time-divisionally dividing each terminal-unit signal into first N signals within a corresponding time slot;
converting the first N signals into second N signals having a transmission-rate lower than that of the first N signals;
providing the second N signals separately to a plurality of base stations; and
converting each of the second N signals into a plurality of radio signals and transmitting each of the plurality of radio signals from an antenna of each of the base stations to respective terminals.

23. (ONCE AMENDED) An apparatus for a radio LAN system, comprising:
a first unit receiving an input signal obtained by time-multiplexing a plurality of signals to be sent to a plurality of terminals;
a second unit determining a terminal-unit signal to be sent to a corresponding terminal for each of a plurality of time slots of the input signal;
a third unit time-divisionally dividing each terminal-unit signal into first N signals within a corresponding time slot;
a fourth unit converting the first N signals into second N signals having a transmission-rate lower than that of the first N signals;
a fifth unit providing the second N signals separately to a plurality of base stations; and
a sixth unit converting each of the second N signals into a plurality of radio signals and transmitting each of the plurality of radio signals from an antenna of each of the base stations to respective terminals.

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cancel.*

REMARKS

Claims 3-5, 8, 9, 11, 12, 22, and 23 are pending in this application. Claims 3-5, 8, 9, 11, and 12 have been allowed. Claims 22 and 23 have been rejected. No new matter is being presented, and approval and entry are respectfully requested.

Entry of Amendment Under 37 C.F.R. §1.116

Applicant requests entry of this Rule 116 Response because it is believed that the amendment of claims 22 and 23 puts this application into condition for allowance. The

amendments were not earlier presented because the Applicant believed in good faith that the cited prior art did not disclose the present invention as previously claimed.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

The Rejection Under 35 U.S.C. §112 And The Objection To The Drawings

In items 2 and 3 on pages 2 and 3 of the Office Action, the Examiner rejected claims 20 and 21 under 35 U.S.C. §112, first paragraph. Because claims 20 and 21 were cancelled in the previous Amendment filed March 4, 2002, it is assumed that claims 22 and 23 have been rejected under §112, first paragraph. Also, in item 1 on paragraph 2 of the Office Action, the Examiner objected to the drawings under 37 CFR 1.83(a).

The Examiner has asserted that the claims contain features that present new matter and that these features are not shown in the drawings. Applicant respectfully traverses the §112 rejection and the objection to the drawings for the reasons presented below.

Referring to Fig. 3 of the present application, each terminal-unit signal contained in the input signal A is time-divisionally divided into k signals, where k is the number of radio base stations ($k = 3$ in Fig. 3) other than the redundant radio base stations, for each of the time slots. See page 12, lines 27-33 of the specification. A terminal-unit signal for terminal unit B, for example, includes any one of B1, B2, B3, etc. Any one of the terminal-unit signals, such as B1, is a time-continuous signal. It is inherent that the time-continuous signal B1 must be extracted or identified to be individually processed, as shown in Fig. 3. In other words, the time-continuous signal B1 must be extracted to be time-divisionally divided into signals B1-1, B1-2, and B1-3 (first N signals). Claims 22 and 23 have been amended herein to clarify these features.

Thus, it is submitted that claims 22 and 23 meet the requirements of 35 U.S.C. §112, and that the drawings meet the requirements of 37 CFR 1.83(a). Accordingly, Applicant

respectfully requests withdrawal of the rejection to the claims under §112 and the objection to the drawings.

Rejection Under 35 U.S.C. §103

In items 3 and 4 on pages 3-5 of the Office Action, the Examiner rejected claims 22 and 23 under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art in view of Alexis (U.S. Patent No. 4,385,381). Applicant respectfully traverses this rejection for the reasons presented below.

Claim 22 of the present invention, as amended, specifies determining a terminal-unit signal to be sent to a corresponding terminal for each of a plurality of time slots of the input signal, time-divisionally dividing each terminal-unit signal into first N signals within a corresponding time slot, converting the first N signals into second N signals having a lower transmission rate than that of the first N signals, and providing the second N signals separately to a plurality of base stations. Claim 23 recites similar language.

The Examiner asserted on pages 3 and 4 of the Office Action that the admitted prior art discloses dividing the input signal and transmitting the divided input signal to a plurality of base stations. However, the admitted prior art merely discloses that a signal is transmitted to the base stations, the signals received at the base stations are transmitted to the terminal station, and the terminal station selects an optimum one of the received signals and demodulates the selected signal. See page 2, lines 1-13 of the specification.

It is known in the art that the diversity effect is achieved by selecting at a receiving terminal an appropriate one of a plurality of identical signals sent from a plurality of base stations, where the selection is made according to reception levels, etc. Thus, the admitted prior art does not teach or suggest dividing (rather than copying) an input signal and transmitting the divided signal to a plurality of base stations.

Therefore, it is submitted that claims 22 and 23 patentably distinguish over the prior art. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under §103.

CONCLUSION

It is submitted that the references, either taken alone or in combination, do not teach the present claimed invention. Thus, claims 22 and 23 are deemed to be in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Finally, if there are any additional fees associated with filing of this response, please charge the same to our Deposit Account No. 19-3935.

Date: 8/19/02

Respectfully submitted,
STAAS & HALSEY LLP
By: C. Joan Gilsdorf
Christine Joan Gilsdorf
Registration No. 43,635

Suite 500
700 Eleventh St., N.W.
Washington, D.C. 20001
(202) 434-1500



Serial No. 08/406,752

Docket No. 614.1804/CJG

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please **AMEND** the following claims:

22. (ONCE AMENDED) A communication method for a radio LAN system, comprising:
receiving an input signal obtained by time-multiplexing a plurality of signals to be sent to
a [terminal] plurality of terminals;

[extracting a time-continuous signal for the terminal from the input signal;]

determining a terminal-unit signal to be sent to a corresponding terminal for each of a
plurality of time slots of the input signal;

time-divisionally dividing [the time-continuous] each terminal-unit signal into first N
signals within a corresponding time slot;

converting the first N signals into second N signals having a transmission-rate lower than
that of the first N signals;

providing the second N signals separately to a plurality of base stations; and

converting each of the second N signals into a plurality of radio signals and transmitting
each of the plurality of radio signals from an antenna of each of the base stations to [the
terminal] respective terminals.

23. (ONCE AMENDED) An apparatus for a radio LAN system, comprising:

a first unit receiving an input signal obtained by time-multiplexing a plurality of signals to
be sent to a [terminal] plurality of terminals;

a second unit determining a terminal-unit signal to be sent to a corresponding terminal
for each of a plurality of time slots of the input signal [extracting a time-continuous signal for the
terminal from the input signal];

a third unit time-divisionally dividing [the time-continuous] each terminal-unit signal into
first N signals within a corresponding time slot; 1st

a fourth unit converting the first N signals into second N signals having a transmission-
rate lower than that of the first N signals; Rate convert

a fifth unit providing the second N signals separately to a plurality of base stations; and

a sixth unit converting each of the second N signals into a plurality of radio signals and
transmitting each of the plurality of radio signals from an antenna of each of the base stations to

20

Serial No. 08/796,752

Docket No. 614.1804/CJG

[the terminal] respective terminals.